



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,861	10/17/2003	Atsushi Tabata	243717US3DIV	1725
22850	7590	08/27/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BOTTORFF, CHRISTOPHER	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

ST

Office Action Summary	Application No. 10/686,861	Applicant(s) TABATA, ATSUSHI	
	Examiner Christopher Bottorff	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-94 is/are pending in the application.
- 4a) Of the above claim(s) 20-27, 41-43 and 49-94 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-40 and 44-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The preliminary amendment filed October 17, 2003 has been entered. Claims 1-19 are canceled. Claims 20-94 are pending.

Election/Restrictions

Applicant's election with traverse of Group I and Species A, directed to claims 28-40 and 44-48, in the reply filed on June 24, 2004 is acknowledged. The traversal is on the ground(s) that the examiner has not set forth the manner in which the inventions are distinct. This is not found persuasive.

Below the list of inventions on page 2 of the restriction requirement is a description of how the inventions are independent and distinct. There it is explained that inventions I and IV, which respectively include claims 28 and 29, are distinct in that they are not usable together and they function differently. Also, claims 28 and 49 define different structure that further distinguishes the two inventions. For example, claim 49 defines a transmission and a change gear ratio, which is not defined in the invention of claim 28. Although some of the limitations of the two inventions are the same, the different limitations define distinct inventions.

The standard found in §806.04 and §808.01 relates to restriction between distinct inventions and election of species, rather than election of species alone as suggested by Applicant. Although election of species is addressed in §806.04(C) and §808.01(a), restriction between independent inventions is addressed in §806.04(A) and

§808.01. Thus, the standards of §806.04 and §808.01 apply to the restriction between independent inventions.

In regard to the election of species requirement, there is no need for the restriction requirement of the independent inventions defined in claims 28-48 and 49-60 to have an additional justification as they relate to the species. The justification for restriction was already provided in relation to their independent and distinct nature. The independent inventions presented on page 2 of the restriction requirement include claims directed to the various species disclosed in the present application. The examination of the one independent invention elected by Applicant is further restricted to the one elected species as it is defined in the claims of the elected invention.

The requirement is still deemed proper and is therefore made FINAL.

Claims 28-40 and 44-48 are being considered on the merits and claims 20-27, 41-43, and 49-94 are withdrawn from consideration as being directed to non-elected inventions.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/576,444, filed on May 22, 2000.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on October 17, 2003 was considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-40 and 44-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims broadly characterize the invention as a "moving object," which suggests an apparatus with a scope that exceeds that which has actually been invented and does not use the expression in a manner that is consistent with its usual meaning. Applicant attempts to define a "moving object" on page 7, lines 24-28, of the specification as being limited to objects that move with power, such as vehicles (interpreted to mean motor vehicles or automobiles), vessels, and aircraft. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947).

Applicant's definition is not consistent with the generally accepted meaning of the expression "moving object." The disclosed "moving object" appears to be limited to a family of hybrid electric vehicles, where the term "vehicles" is understood to include automobiles, marine vessels, aircraft and similar conveyances. In contrast, a "moving

object” is usually understood to include any object in motion. Although Applicant does not desire to limit the invention to the field of transportation, as discussed on lines 26-28 on page 7 of the specification, the disclosure fails to explain how the invention could be applied to devices in other fields such that one of ordinary skill in the art in that field could make and/or use the invention. Thus, the expression “moving object,” as used in the claims and throughout the disclosure, is not consistent with its usual meaning and implies a scope that exceeds the scope of the actual invention.

In addition, the expression “moving object” does not accurately define the present invention. Objects such as automobiles, marine vessels, and aircraft are not always in motion. At a time when such an object is stationary (i.e. parked), it would not be defined by the claims even if it included the claimed system. Perhaps the claimed apparatus would be better characterized as a hybrid electric vehicle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-34, 36, 37, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito US 5,808,448 in view of JP 50-31516.

Naito discloses a moving object in the form of a vehicle having a motor 14, a fuel cell 1, a secondary battery 2, a regulation unit 12, and a control unit 10. See Figure 1.

The vehicle further has a remaining charge measurement unit 5, a high torque condition decision unit 30, an accelerator travel measurement unit (see column 3, lines 64-65, and column 4, lines 27-28), a required torque input unit (the accelerator itself), and auxiliary machinery 120a, 120b, 120c, linked with the motor (see column 7, lines 2-5). Naito does not disclose that the moving object also has a heat engine.

However, JP 50-31516 teaches that the practice of providing a motor 2 and heat engine 1 in combination as two power sources in a system was old and well known in the art at the time the invention was made. See the English abstract. From the teaching of JP 50-31516, providing the system of Naito with a heat engine in addition to the motor would have been obvious to one of ordinary skill in the art at the time the invention was made. This would provide the system with an additional source of power having technology that is reliable and well established.

The additional limitations of the claims attempt to define the apparatus in terms of function and intended use. However, it is well settled that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device *is*, not what it *does*.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (emphasis in original). Furthermore, claims containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all of the structural limitations of the claims. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

The vehicle produced from the combination of the teachings of Naito and JP 50-31516 includes all of the structural limitations of the claims. Moreover, the system of Naito, as modified by JP 50-31516, is capable of performing the claimed functions. Thus, the invention defined by the claims does not distinguish over the prior art.

Claims 35 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito US 5,808,448 in view of JP 50-31516 as applied to claim 28 above, and further in view of Kubo US 5,722,502.

Naito does not disclose a drive mode switch or a second motor, as defined in claims 35 and 38. However, Kubo teaches the desirability of providing a vehicle with a drive mode switch. See column 10, lines 14-20. Kubo also teaches the desirability of providing a vehicle with an engine with a second motor 30. See Figure 1. From the teachings of Kubo, providing the vehicle of Naito with a drive mode switch would have been obvious to one of ordinary skill in the art at the time the invention was made. This would allow an operator to select a drive mode that is suitable for desired driving conditions. From the further teachings of Kubo, providing the vehicle of Naito, as modified by JP 50-31516, with a second motor would have been obvious to one of ordinary skill in the art at the time the invention was made. This would help effectively start the engine.

Allowable Subject Matter

Claims 45-48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach a power estimation unit in combination with the further limitations of the claims as defined in claim 45.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lyons et al. US 5,929,595, Chady et al. US 6,091,228, and Lyons et al. US 6,116,368 disclose hybrid electric systems with battery control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (703) 308-2183. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on (703) 305-0168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher Bottorff



CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600